

## Physical Activity and Hypertension

**Abeer Mansour Alkhasawneh**

*Irbid University College – Al-Balaq’a Applied University*  
 Corresponding Author: Abeer Mansour Alkhasawneh

**Abstract:** *The study aim at studying the relation between the level of the systolic pressure and the sport of jogging and walking regularly in Al-Huson sports city in Irbid in the north of Jordan at early time of the day for 6 days weekly .*

*The sample members jogging about 5 to 7 circle with 1200m per circle.*

*The level of systolic pressure was measured for the sample members daily at 10 am before breakfast. The result of measuring were compared with another controlling sample for members of the Jordanian society who don not practice any kind of sport .*

*The controlling sample consisted of 10 members who their systolic pressure was measured to the results show the sample which was subject to the independent variable with mean 120 mmHg Comparing with the measures of the controlling sample with mean 134 mm hg*

*T – test was used to compare the results .*

*The results of T – test showed times for the sample that practices sport and the study included one case study of a patient suffers from permit hypertension who practices sports regularly .*

*The level of systolic pressure of this person were measured in the moving so and recording data shows minimums level of pressure , the results of the measurement shows very excellent outcomes of pressures levels did not raise completely for one month.*

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*Previous studies :*

| Reference   | Title of the article  | Country   | Journal/Organization                              | Date | Comments |
|---|---|-----------|---|------|----------|
| Susan p,helmrich, David R .RAGLAND  | Physical activity and reduced occurrence of non –insulin dependent diabetes mellituse                             | Australia | New England journal of medicine                   | 1991 |          |
| Ralph s,Paffenbarager,Dexterl.jung,Robertt.Hyde                           | Physical activity and hypertension :an epidemiological view   |           | Annals of medicine                                | 1991 |          |
| Gang hu,noel c. Barengo,jaakkotumilehto,tuomo a ,lakka.andpekkajousilahti | Relationship pf physical activity and body mass index to the risk of hypertension :a prospective study in Finland | finland   | School of public health of tampere journal        | 2004 |          |
| Keith m ,diaz and daichishimbo  | Physical activity and the prevention of hypertension  | usa       | Columbia medical center journal                   | 2013 |          |
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| Mats borjesson ,arononerup ,Stefan lundqvist ,bjorndahlof                 | Physical activity and exercise lower blood pressure in individualswith hypertension :narrative review of 27 rct s | uk        | British journal of medicine                       | 2015 |          |
| Anisa m durrani and waseemftima   | Effect of physical activity on blood pressure distribution among school children                                  | india     | Advances in public health journal                 | 2015 |          |
| Mona alsairafi,Khalilalshamali,anwar al-rashed                            | Effect of physical sctivity on controlling blood pressure among hypertension patients from mishref area of Kuwait | kuwait    | European journal of general medicine              |      |          |

## I. Introduction

The benefits of jogging and walking for pressure patients

- Walking is one of the best sports that participate in controlling the level of blood pressure in the body.
- Walking sport activity muscles and strengthens the bones that are effected by the increasing in blood pressure.
- Walking activities the blood acre which increase controlling blood pressure .
- Walking sport can protect heart of damaging due to increasing in blood pressure .
- Walking decreases the level of cholesterol which accompanies the increasing of blood pressure .
- Walking protects the damaged veins of the increasing of blood pressure in the body .
- In general walking increases the body immunity and protects it of diseases .
- Walking helps reducing tension and improving mood which results in decreasing blood pressures .
- Walking sports is the best promotion for all body organs and improving their action and so controlling diseases.

Physical activity like jogging and walking or cycling increases the metabolic of the active musculature. That means the blood flow out away from non – active circulating supplying the active , muscles which can be do reduction in systemic vascular resistance , the body needs to supply the increased of oxygenated blood in the active regions . So the cardiacoutput increase in activity and heart rate at the body .

### Data reduction :

| person |     | D2  | D3  | D1  | D5  | X     | weight | Length | BMI   |
|--------|-----|-----|-----|-----|-----|-------|--------|--------|-------|
| 1      | 110 | 100 | 120 | 140 | 98  | 113.6 | 75     | 1.73   | 25    |
| 2      | 130 | 125 | 130 | 125 | 130 | 128   | 78     | 1.78   | 24.61 |
| 3      | 140 | 100 | 110 | 125 | 120 | 119   | 90     | 1.74   | 29.72 |
| 4      | 140 | 140 | 140 | 145 | 100 | 133   | 87     | 1.70   | 30.10 |
| 5      | 120 | 120 | 110 | 105 | 115 | 114   | 70     | 1.73   | 23.38 |
| 6      | 120 | 120 | 98  | 130 | 90  | 111.6 | 73     | 1.78   | 23.04 |
| 7      | 120 | 100 | 100 | 140 | 100 | 112   | 77     | 1.80   | 23.76 |
| 8      | 100 | 140 | 140 | 120 | 120 | 124   | 85     | 1.69   | 29.76 |
| 9      | 100 | 150 | 155 | 100 | 120 | 125   | 79     | 1.71   | 27.01 |
| 10     | 130 | 145 | 130 | 120 | 120 | 129   | 81     | 1.70   | 28.02 |

Figure 1: systolic pressure for experimental groups

| Person | D1  | D2  | D3  | D4  | D5  | X   |
|--------|-----|-----|-----|-----|-----|-----|
| 1      | 140 | 135 | 130 | 135 | 130 | 132 |
| 2      | 130 | 125 | 100 | 110 | 125 | 118 |
| 3      | 110 | 120 | 140 | 145 | 120 | 129 |
| 4      | 120 | 130 | 140 | 120 | 130 | 128 |
| 5      | 100 | 110 | 135 | 110 | 115 | 114 |
| 6      | 165 | 145 | 140 | 150 | 140 | 148 |
| 7      | 145 | 145 | 150 | 160 | 150 | 150 |
| 8      | 175 | 160 | 170 | 145 | 170 | 164 |
| 9      | 160 | 145 | 160 | 120 | 140 | 145 |
| 10     | 110 | 105 | 130 | 120 | 105 | 114 |

Figure 2: systolic pressure for control groups

### Theory:

Sports exercises : a technique to reduce high blood pressure without drugs .

Having high blood pressure and not practicing enough exercises are strongly linked to each other . find out how little changes in your daily routine might make big change .

The danger of having high blood pressure the increasing of vein tension increases by ageing but little practicing of exercise make a big difference . if you actually have high blood pressure practicing exercise will help you to control it . do not think that you have to run in marathon or a gym , instead start gradually practicing more physical activates in your daily routine .

How can practicing sports reduce your blood pressures level ?

What is the relation between high blood pressure and practicing sport ?

Practicing sports strengthens your heart muscle regularly the strongest heart can pump more blood with little effort when your heart plumbs blood with little effort the pressure on your veins will reduce which in results will reduce blood pressure .

When you become more active , the stylistic pressure might reduce for your , which is the maximum figure in the measurement of blood pressure from4-9 mm of the mercury in average .

It equals in its activity some blood pressure drugs . for certain people , practicing sports for some time is enough to reduce the need for blood pressure drugs .If your blood pressure is moderate less than 60/120mm of mercury – practicing sports may help you avoiding the increase of high blood by aging.

Practicing sports regularly helps you pressuring healthy weight which is another way to control the level of blood pressure .

To pressure low level of blood pressure , you need practicing sports regularly . it may take between month to three of practicing sports before seeing a noticeable effect on the blood pressure level . the benefits of this is only by keeping practicing sports .

How many physical exercises do you need?

Fresh air activity is one of the effective ways for controlling high blood pressure sports of flexibility and strength like weight lifting are important parts of the physical fitness plane.

You don't need to spend many hours in the gym daily to get benefit of the fresh air activities in your daily routine

The physical activities that increases the average of heartbeats and breathing are considered fresh air activities such as homework, trimming, cleaning leaves and working in the garden ,cleaning ground active sports like basketball ,tennis, stairs climbing ,walking , running , bicycling ,swimming and dancing

The ministry of health and human services recommend practicing moderate fresh air activities for 150 minutes at least or practicing 75 minutes of strong fresh air activities weekly or to combine them. Try to practice fresh air sport for 30 minutes at least in most of the weekly .

If you could not have that time , the remember that simple average of sport might make difference too. You can divide physical exercises for certain sessions for 10 minutes each of fresh air activities to have the benefits of a continuous physical sessions 30 minutes .

If you sit for certain hours daily try to reduce the time of sitting. Research prove that much sitting causes many health problem. Try practicing non-active physical activities , for 5 – 10 minutes hourly like bringing a cup of water or walking for a while. Think of having a reminder on your e-mail calendar or your smart phone.

Practicing weight lifting might cause temporary increase in blood pressure during the exercises. This increase might be impressive depending on the weight you lift .

Lifting weight might have benefits for blood pressure on the long term overcome the temporary height of blood pressure which causes for most people . it may improve heart health and blood veins which may reduce the whole dangers of heart and blood veins diseases. The ministry of health and human service recommended integrating the targeted power exercise , for all major muscular groups in a physical fitness system and to do then to twice a week at least.

If you suffer from high blood pressure and you like to Include weight lifting in your fitness program then remember to learn the right form of exercise and use it .

Using the right method and form of lifting weight at exercise to limit injuries. Do not keep breathe in your chest as it may cause a sudden dangerous increasing in blood pressure while exercising. Instead , breathes smoothly and continuously in each exercise . lift light weight with more level as heavy weight require more effort which increase blood pressure you can challenge your muscle with light weight by increasing the times of exercise .

You must listen to the body, stop your exercises immediately at strong breathing and dizziness or if you had pain in your chest or fatigue .

If you have high blood pressure consult you physician before adding weight lift exercises to your own physical fitness program .

When do you need agreement of the physician ?

It is before to consult the physician before starting physical program particularly in these cases : if you are man over 45 or women over 55 , if you are smoker or quit smoking in the last six months, if you suffer from heavy weight or fat , if you have permanent disease , like diabetes or heart , veins and lung diseases .

If you have high cholesterol or high blood pressure , if you have heart attack before , if you have family history of heart diseases before 55 for men and 65 for women .

If you pain in chest , chain , neck , arms during exercise , if you dizzy which excreting , if you do not know that you are healthy .

You having drugs regularly consult physician to find if medicine would affect your response to exercise

## **II. Conclusions and Recommendations**

- regular activity has benefit of low blood pressure for women, men and younger adults
- regular activity helps blood pressure patients reducing using drugs
- regular activity decreases weight and participate in reducing obesity
- regular activity decreases the risk of cardiovascular diseases

- regular activity change mood from unhappiness to happiness
- regular activity reduces the risk of diabetics

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